

No. 742,554.

PATENTED OCT. 27, 1903.

T. ASHWORTH.
APPARATUS FOR SPINNING AND DOUBLING.

APPLICATION FILED OCT. 4, 1902.

NO MODEL.

FIG. 1

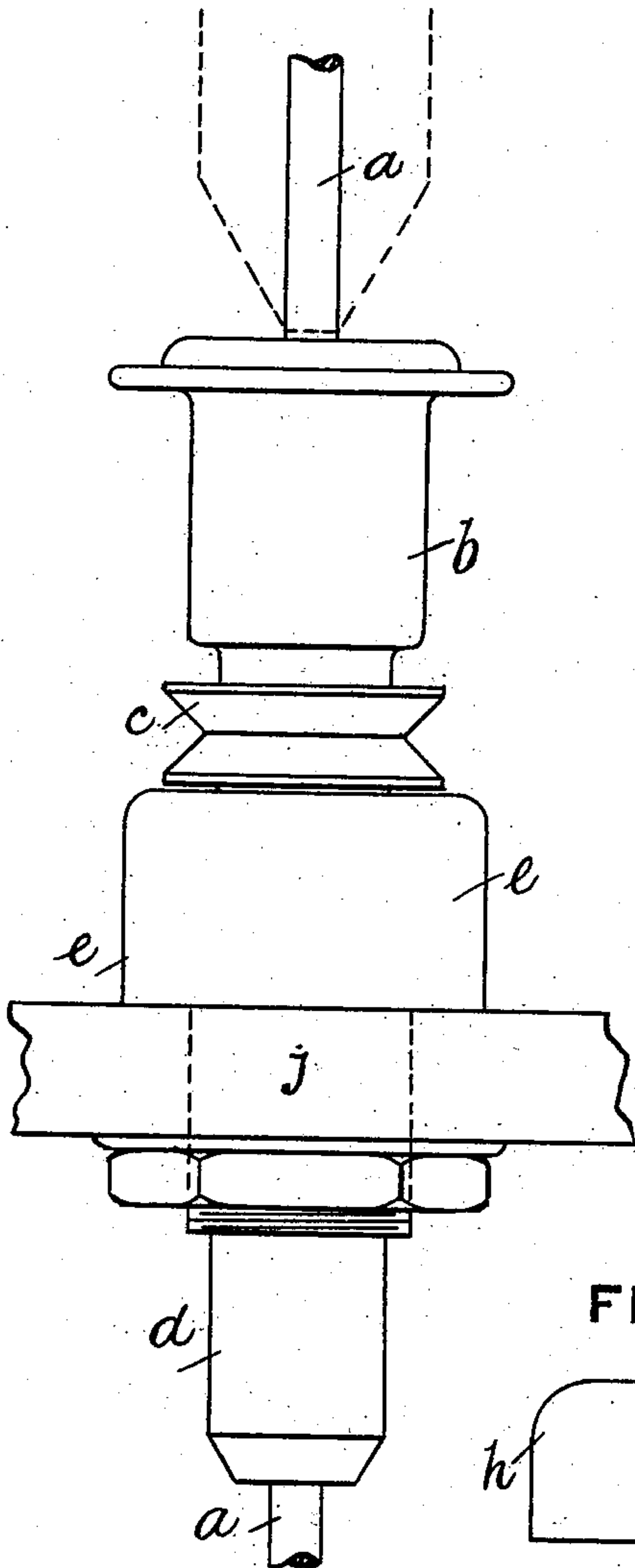


FIG. 2

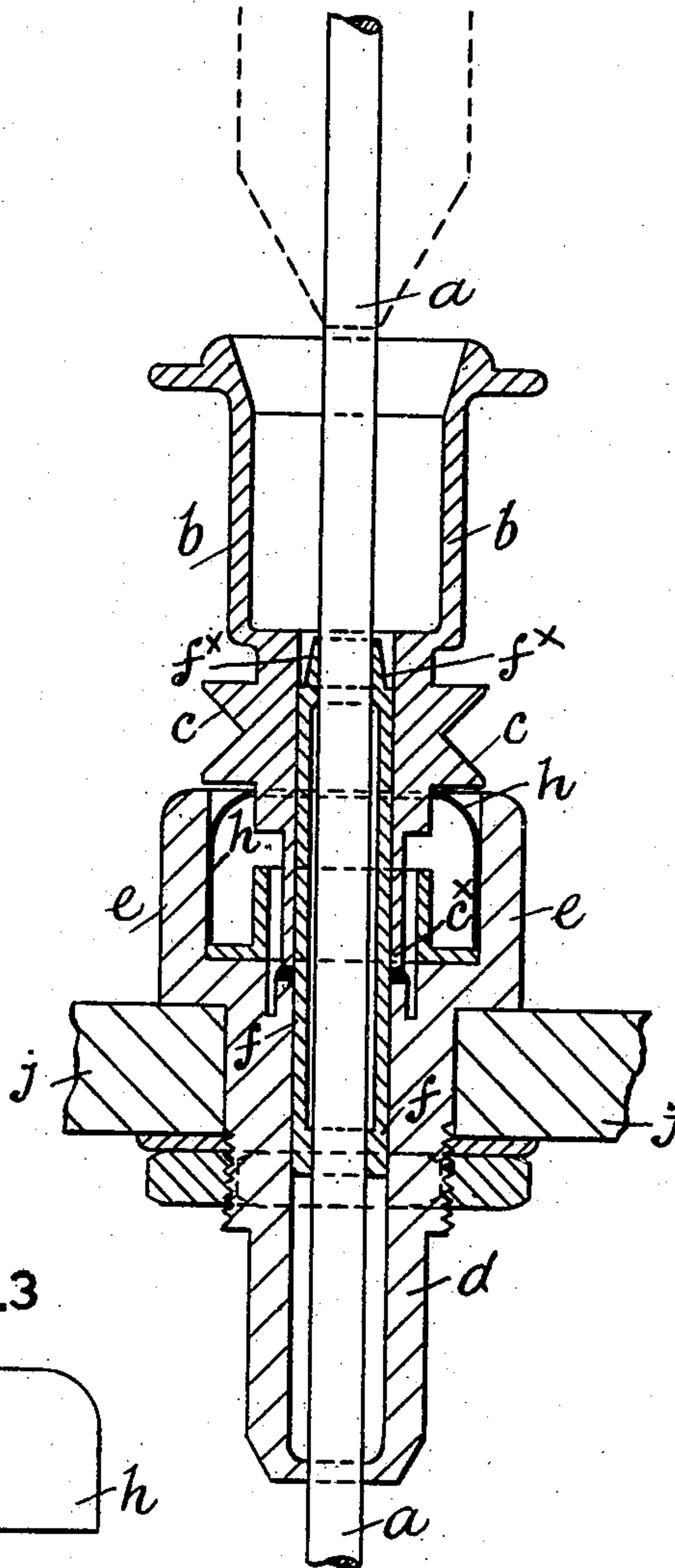


FIG. 3

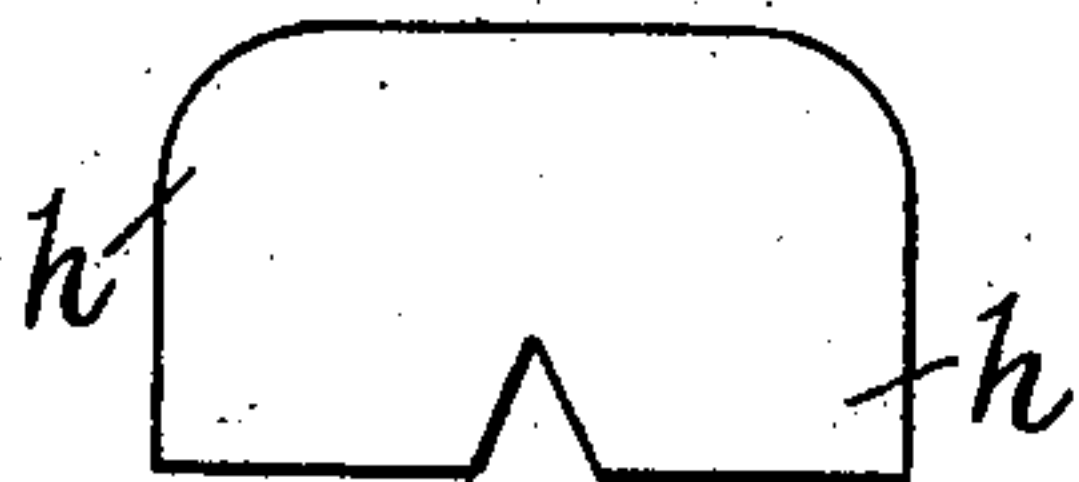
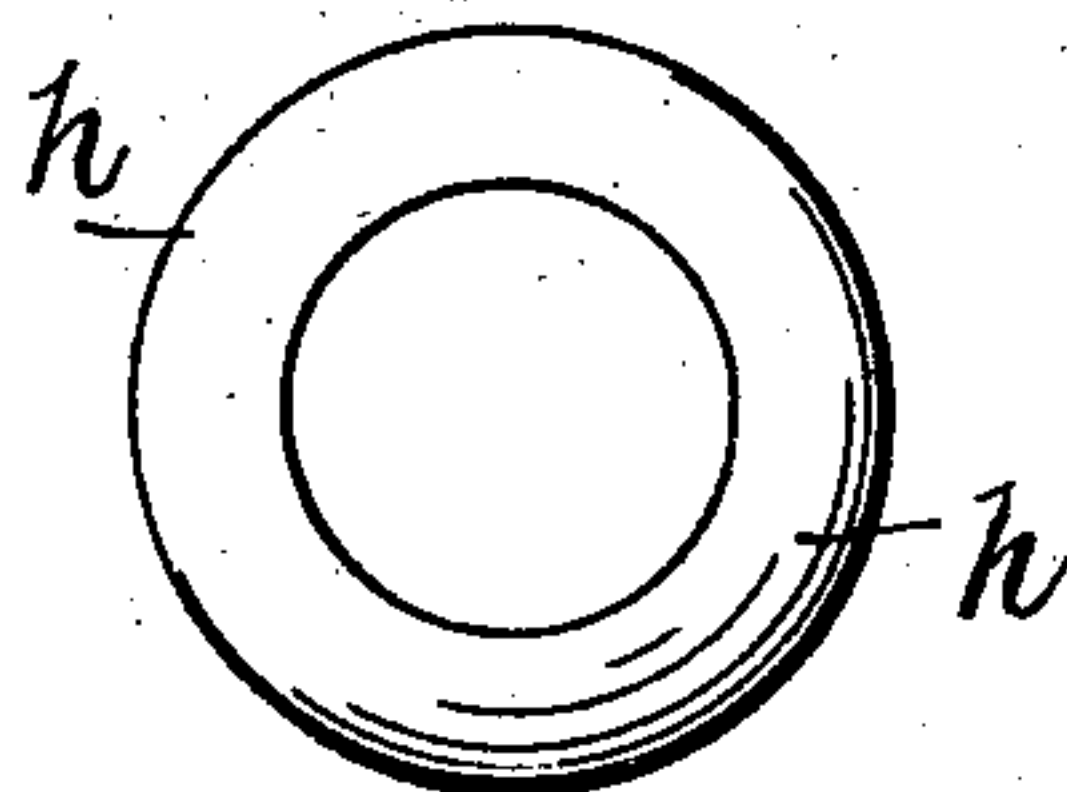


FIG. 4



WITNESSES:
E. W. Collins
G. W. Wright.

INVENTOR
THOMAS ASHWORTH
BY
Howden and Howden
HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS ASHWORTH, OF URMSTON, NEAR MANCHESTER, ENGLAND, AS-
SIGNOR OF ONE-HALF TO JOSEPH SHAW GAUNT, OF MANCHESTER,
ENGLAND.

APPARATUS FOR SPINNING AND DOUBLING.

SPECIFICATION forming part of Letters Patent No. 742,554, dated October 27, 1903.

Application filed October 4, 1902. Serial No. 125,892. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ASHWORTH, a subject of the King of Great Britain and Ireland, residing at Lynwood, Urmston, near Manchester, in the county of Lancaster, Eng-
land, have invented new and useful Improve-
ments in Apparatus for Spinning and Dou-
bling Cotton and other Fibrous Substances, of
which the following is a specification.

This invention relates to improvements on
the subject-matter of a prior patent for the
United States of America granted to me, bear-
ing date October 25, 1898, No. 613,106; and
the objects of the present invention are, first,
to prevent the lubricating-oil from rising up
between the flier-tube and the spindle, so as
to reach the inside of the cup, and thus soil the
nose of the cop, and, secondly, to prevent the
oil in the oil-cup from being thrown out by cen-
trifugal force between the top of the oil-cup
and the bottom of the wharve of the flier; and
I do hereby declare that the following is a full,
clear, and exact description of my said in-
vention, which will enable others skilled in
the art to which it appertains to make and use
the same, reference being had to the accom-
panying sheet of drawings, and to the figures
and letters of reference marked thereon,
which form a part of this specification.

Figure 1 on the drawings is an elevation, and
Fig. 2 a partial vertical section, of so much of
the spindle and its adjuncts of a spinning
or doubling frame as is necessary to illustrate
my invention. Figs. 3 and 4 are detached ele-
vation and plan views of a certain portion
thereof, hereinafter more particularly re-
ferred to.

a is the spindle, *b* the cup-shaped flier, with
its wharve *c*, and *d* is the bolster, made with an
oil-cup *e* and an inner tube *f* and fixed in the
rail *j*, so that the spindle will freely revolve
in the tube *f*, which is fast in the bolster,
and the whirl will be rotated on the outside
of the tube *f*.

For effecting the first object I make the up-

per end of the inner tube *f* of the bolster *d*,
on which the cup-shaped flier *b* revolves, of a
conical shape on the outside, as shown at *f*^x
on Fig. 2, the top of the cone being rather be-
low the inside of the cup *b*, and as it is a well-
known fact that oil will not rise up the out-
side of a cone this arrangement entirely pre-
vents the oil from ascending into the cup *b*
and soiling the nose of the cop, and for ef-
fecting the second object I place inside the
oil-cup *e* of the bolster *d* and resting on the
bottom thereof a thin metal shield *h* (see also
detached views 3 and 4) of such a diameter
as to fit loosely into the cup. The upper part
of this shield is made to curve inward, so as
to embrace the lower boss of the flier-wharve
c just below the bottom of the latter, and
thus prevent the oil in the cup *e* from being
thrown out by centrifugal force between the
top of the cup *e* and the bottom of the wharve *c*.

I claim as my invention—

1. A rotating cup-shaped flier, a wharve at
the lower end of the flier, a spindle passing
freely through them, and a bolster-tube *f* be-
tween the rotating flier and spindle, and hav-
ing a conical upper end terminating at the
lower end of the cup-shaped flier, substan-
tially as described.

2. A cup-shaped flier, a wharve at the lower
end of the flier, a spindle passing freely
through them, and a bolster-tube *f* between
the flier and spindle, in combination with an
oil-cup in which the flier rests, a boss on the
lower side of the wharve rotating within said
oil-cup and a circular metal shield within the
oil-cup embracing the boss on the wharve,
substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

THOMAS ASHWORTH.

Witnesses:

JNO. HUGHES,

J. ERNEST HUGHES.